Problem-Solution fit canvas 2.0

Purpose / Vision

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Agriculture is the main aspect of country development. Agriculture field which gives fully related to agriculture products. Plant disease is one of the major factor of reductions in both quality and quantity of the food crops. Plant is affected by leaf disease then it reduce the growth of the agriculture level. Finding the leaf disease and recommended the suitable fertilizer for the disease leaf.

6. CUSTOMER CONSTRAINTS — CC

Detection and recognition of plant diseases using machine learning are very efficient in providing symptoms of identifying disease at its earliest. Plant pathologists can analyze the digital images using digital image processing for diagnosis of plant disease.

5. AVAILABLE SOLUTIONS — AS

Support Vector Machine(SVM) method is used to predict leaf disease and recommended the fertilizer.

Merits: Identify the disease leaf and recommended the suitable fertilizer.

Demerits: Each formers don't have smart phone to use regularly.

Explore AS, [illegible]

Focus on J&P, tap into BE, understand RC

2. PROBLEMS — J&P

A digital camera or similar devices are used to take images of different types and then those are used to identify the affected area in leaves. Then different types of image processing techniques are applied to them, the process those image to get different and useful features needed for the purpose of analyzing plant leaf disease identification is especially needed to predict both quality and quantity.

9. PROBLEM ROOT CAUSE — RC

- Lack of affected plants .
- Lack of or incorrect training data.
- They did not know about the plant.

7. BEHAVIOUR — BE

Farmers implements scan the disease leaf to predict the disease and recommended the fertilizer. This service more flexibility and also provide additional information about the plant.

Focus on J&P, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS — TR

Leaves are affected by bacteria, fungi , virus and other insects. Support Vector Machine algorithm classifies the leaf image as normal or affected. Vector are constructed based on leaf features such as color , shape , textures. Then recommended the fertilizer for affected leaves based on severity level. Fertilizer may be organic or inorganic.

4. EMOTIONS: BEFORE / AFTER — EM

*If the farmer did not identify the plant disease they will loss the crop field.

*Our project is recommended the fertilizer providing symptoms of identify the disease at its earliest.

10. YOUR SOLUTION — SL

In this problem solution uses SVM to classify tree leaves, identify the disease and suggest the fertilizer. The proposed method is compared with the existing CNN based leaf disease prediction. The proposed SVM technique gives a better result when compared to existing CNN. For the same set of images , F Measure for CNN is 0.7 and 0.8 for SVM the accuracy of identification of leaf disease of CNN is 0.6 and SVM is 0.8.

8. CHANNELS of BEHAVIOUR — CH

1. ONLINE

We notify the information about the disease leaf and recommended fertilizer.

8.2 OFFLINE

You are offline the application does not show the any information.

Extract online & offline CH of

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